



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Col

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|-----------------------|---------------------|------------------|
| 09/894,201 | 06/27/2001 | Jonathan E. Michelson | 62191 | 7094 |
| 26327 | 7590 | 07/27/2005 | | |
| | | | EXAMINER | |
| | | | MURPHY, RHONDA L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2667 | |

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/894,201 | MICHELSON ET AL. | |
| | Examiner | Art Unit | |
| | Rhonda Murphy | 2667 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
 THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 5/12/05
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-5,7,8,10-20 and 22-36 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 10-15 and 22-32 is/are allowed.
- 6) Claim(s) 1-5,7,8,16-20 and 33-36 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 June 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 5/12/05.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

Response to Amendment

1. This communication is responsive to the amendment filed on May 12, 2005.

Accordingly, claims 6, 9 and 21 have been canceled, claims 33-36 have been added and claims 1-5, 7-8, 10-20 and 22-36 are currently pending in this application.

Examiner would like to note a minor informality with the amended notation in the claims – claim 32 is indicated in the claims as “(canceled)”, but should read “(currently amended)”.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7-8, 16-20 and 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dally (US 2001/0033569) in view of Hughes et al. (US 6,870,831).

Regarding claims 1 and 16, Dally teaches a method for sending a plurality of ordered sets of data, the method comprising (a) identifying a current barrier phase (page 3, paragraphs 44 – 45; the middle stage switch propagates a prepare-to-switch (PTS) signal to all stages) and after said (a) identifying operation: (b) repeatedly, until all of the plurality of ordered sets of data have been sent: sending an ordered set of data of the plurality of ordered sets of data indicated by a current data set indicator along with an

Art Unit: 2667

indication of the current barrier phases (page 3, paragraphs 44 – 45 and 48-50; the PTS signal indication propagates through all stages, and each last stage switch passes the PTS indication to the corresponding first stage switch of the network; page 3, paragraph 47-48; the data is transmitted through the switching stages since the PTS signal is embedded in the data, and forwarded through the switches); and advancing the current data set indicator to a next ordered set of data of the plurality of ordered sets of data (page 3, paragraphs 49-50); and (c) in response to completing said (b) operation, repeating said (a) and (b) operations (page 3, paragraphs 44 – 45 and 48-50; the PTS signal indication propagates through all stages, and each last stage switch passes the PTS indication to the corresponding first stage switch of the network).

Dally fails to explicitly disclose a current barrier phase different than the previous said current barrier phase, wherein the possible barrier phases consists of two possible barrier phases.

However, Hughes teaches a current barrier phase different than the previous said current barrier phase, wherein the possible barrier phases consists of two possible barrier phases (col. 20, lines 2-5; two states: “out of frame alignment state” or “in frame alignment state”).

In view of this, it would have been obvious to one skilled in the art to modify Dally’s system by incorporating two different barrier phases, in order to enable the system to perform a specific action according to the identified phase.

Art Unit: 2667

Regarding claims 2 and 17, Dally teaches means for inverting a barrier bit in response to identifying the barrier phase transition (page 3, paragraph 46-47; the second A1 byte of the frame is inverted to signal the PTS is present).

Thus, it would be obvious to realize a different barrier phase exists, upon transitioning.

Furthermore, Hughes teaches a current barrier phase different than the previous said current barrier phase (col. 20, lines 2-5).

In view of this, it would have been obvious to one skilled in the art to modify Dally's system by identifying two different barrier phases by inverting a barrier bit, in order to enable the system to perform a specific action according to the identified phase/bit.

Regarding claims 3 and 18, Dally further teaches means for sending a start bit indication when the current data set indicator indicates the predetermined ordered set of the plurality of ordered sets of data (page 3, paragraphs 46-47; the PTS signal contains two bits of information that indicates the presence of the signal. One of these bits represents the start bit, which indicates the beginning of the data to be transmitted).

Regarding claims 4 and 19, Dally further teaches including flow control information in the plurality of ordered sets of data (it would be obvious to one skilled in the art that the two bits of information carried in the PTS signal, which is embedded in the data, comprise flow control information in order to transmit data to its intended destination with minimal delay or errors; page 3, paragraphs 46-47).

Art Unit: 2667

Regarding claims 5 and 20, Dally further teaches means for adding the ordered set of data to a field of a packet (it would be obvious to one skilled in the art to add data to a field in a packet, since all packets contain fields).

Regarding claims 7 and 8, Dally further teaches a packet switching system and packet switching element performing the method of claim 1. The transmission of frames within the system described by Dally indicates a packet switching system. Hence, Dally indicates packet switching elements transmitting the frames within the packet switching system (Fig. 5).

Regarding claim 33, the combined system of Dally and Hughes teach the same limitations as described above in claims 1 and 16.

Dally does not explicitly disclose a computer-readable medium containing computer-executable instructions for performing the method of claims 1 and 16.

However, it would be obvious to one skilled in the art to include a computer-readable medium in order to execute the instructions for performing the operations.

Regarding claim 34, the combined system of Dally and Hughes teaches the same limitation as described in claims 2 and 17.

Dally does not explicitly disclose a computer-readable medium containing computer-executable instructions for performing the method of claims 2 and 17.

However, it would be obvious to one skilled in the art to include a computer-readable medium in order to execute the instructions for performing the operations.

Regarding claim 35, the combined system of Dally and Hughes teaches the same limitation as described in claims 3 and 18.

Art Unit: 2667

Dally does not explicitly disclose a computer-readable medium containing computer-executable instructions for performing the method of claims 3 and 18.

However, it would be obvious to one skilled in the art to include a computer-readable medium in order to execute the instructions for performing the operations.

Regarding claim 36, the combined system of Dally and Hughes teaches the same limitation as described in claims 4 and 19.

Dally does not explicitly disclose a computer-readable medium containing computer-executable instructions for performing the method of claims 4 and 19.

However, it would be obvious to one skilled in the art to include a computer-readable medium in order to execute the instructions for performing the operations.

Allowable Subject Matter

1. Claims 10-15 and 22-32 are allowed.

Claims 10 and 22 are allowable over the prior art of record since the cited references fail to particularly disclose resetting a current data structure address to a predetermined address within the data structure in response to receiving the barrier bit and receiving the start bit.

Claim 26 is allowable over the prior art of record since the cited references fail to particularly disclose a first barrier accumulator to receive indications of a first subset of a plurality of barrier request messages, to determine when a first barrier request may be sent to the plurality of second elements, and to update the current first barrier state.

Art Unit: 2667

Conclusion

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rhonda Murphy whose telephone number is (571) 272-3185. The examiner can normally be reached on Monday - Friday 8:00 - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2667

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rhonda Murphy
Examiner
Art Unit 2667

rlm


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNICAL CENTER 2860 7/25/05